What is claimed is

1. An on-vehicle picture data transmission system to which a plurality of picture sources are connected via a vehicle-inside communication line, comprising:

a plurality of picture transmitting apparatuses, each of the plurality of picture transmitting apparatus including,

an input unit for inputting a picture signal from the plurality of picture sources,

a data converter for converting the picture signal from the input unit into picture data having a predetermined transfer rate,

a transmission unit for transmitting the picture data converted by the data converter to the vehicle-inside communication line, and

a rate controller for controlling the data converter to control the transfer rate;

a plurality of picture receiving apparatus, each off the plurality of picture receiving apparatus including,

a reception unit for receiving the picture data transmitted from the picture transmitting unit via the vehicle-inside communication line,

a data converter for converting the picture data

from the reception unit into a picture signal,

an output unit for outputting the picture signal converted by the data converter, and

a line management unit for outputting a control signal to the rate controller, the control signal designating the transfer rate of the picture data transferred via the vehicle-inside communication line; and

a provision unit for providing information, which the picture signal from the output unit of the picture receiving apparatus represents, with a user in the vehicle,

wherein the line management unit outputs to the rate controller, a control signal capable of controlling the transfer rate of the picture data from each of the picture transmitting apparatus to the vehicle-inside communication line, based upon transfer capacity information indicative of a transfer capacity of the vehicle-inside communication line and transfer rate information indicative of a transfer rate used in the vehicle-inside communication line, and

wherein the rate controller controls the data converter so that the transfer rate at which the picture data is transmitted by the transmission unit is controlled based upon the control signal for controlling the transfer rate from the line management unit.

2. The on-vehicle picture data transmission system according to claim 1, wherein

the picture source is constituted by a rear monitoring camera apparatus for monitoring a rear-sight of the vehicle, and

the line management unit controls a transfer rate of picture data transmitted from the rear monitoring camera apparatus and a transfer rate of picture data transmitted from another picture transmitting apparatus via the vehicle-inside communication line so that the provision unit provides the information of the picture data imaged by the back-sight monitoring camera apparatus based upon a back gear signal produced when the user sets a back gear.

3. An on-vehicle picture data receiving apparatus for receiving picture data via a vehicle-inside communication line from a plurality of picture transmitting apparatus which converts picture signal from a picture source into the picture data having a transfer rate used when the picture data is transmitted via the vehicle-inside communication line, the on-vehicle picture data receiving apparatus comprising:

a reception unit for receiving the picture data transmitted from each of the picture transmitting apparatus via the vehicle-inside communication line;

a data converter for converting the picture data received by the reception unit into a picture signal;

an output unit for outputting the picture signal converted by the data converter to provide contents of the picture signal to a user in a vehicle; and

a line management unit for outputting to the picture transmitting apparatus, a control signal for designating a transfer rate of the picture data transferred via the vehicle-inside communication line,

wherein the line management unit controls the transfer rate of picture data from each of the picture transmitting apparatus via the vehicle-inside communication line, based upon transfer capacity information indicative of a transfer capacity of the vehicle-inside communication line and transfer rate information indicative of a transfer rate used in the vehicle-inside communication line.

4. The on-vehicle picture data receiving apparatus according to claim 3, wherein

the picture source is constituted by a rear monitoring

camera apparatus for monitoring a rear-sight of the vehicle, and

the line management unit controls a transfer rate of picture data transmitted from the rear monitoring camera apparatus to the vehicle-inside communication line and a transfer rate of picture data transmitted from another picture transmitting apparatus so that the provision unit provides the information of the picture data imaged by the back-sight monitoring camera apparatus when a back gear signal is produced when the user sets a back gear.

5. An on-vehicle picture data transmitting apparatus comprising:

a picture input unit for inputting picture data supplied from a plurality of picture sources which are externally connected;

a transmission reception unit for receiving vehicle information indicative of a condition of a vehicle, and for transmitting picture data via a communication line to a picture display apparatus;

a compressing processor having a plurality of compressing process units, compression systems of which are different from each other;

a selection unit for receiving a plurality of picture data from the picture input unit, and for selectively outputting the picture data from the picture source designated based upon a picture source selection signal to the compressing process unit in response to a compression selection signal; and

a controller for producing the picture source selection signal and the compression selection signal and controlling the compression system based upon the vehicle information to control the selection unit.

6. The on-vehicle picture data transmitting apparatus according to claim 5, wherein

the controller produces the compression selection signal for each of the picture data based upon an image quality required for each of the picture sources.

7. The on-vehicle picture data transmitting apparatus according to claim 5, wherein

the transmission reception unit is connected to a master electronic appliance for monitoring a communication traffic within the vehicle, and receives vehicle information indicative of a communication traffic of a communication

line from the master electronic appliance contained in a network; and

the controller produces the compression selection signal for switch the compression systems of the respective picture data based upon the vehicle information indicative of the communication traffic received from the transmission reception unit.

8. The on-vehicle picture data transmitting apparatus according to claim 5, wherein

the controller produces the compression selection signal for switching the compression system of the picture data based upon a setting position of the picture display apparatus.

9. The on-vehicle picture data transmitting apparatus according to claim 5, wherein

the transmission reception unit is connected to an operation input device which is operated by a user in the vehicle, and receives an operation input signal supplied from the operation input device, and

the controller produces the picture source selection signal and the compression selection signal based upon the

operation input signal to control the selection unit.

10. The on-vehicle picture data transmitting apparatus according to claim 5, wherein

the transmission reception unit is connected to a sensor for sensing a condition of the vehicle; and

the controller produces the compression selection signal based upon a sensor signal from the sensor.

11. The on-vehicle picture data transmitting apparatus according to claim 5, wherein

the controller produces the compression selection signal for switching the compression system based upon vehicle information indicative of a drive condition of the vehicle.